

WHAT IS CLAIMED

1 1. An apparatus for facilitating multimedia communication between a plurality of
2 endpoints over a packet based network, each respective endpoint sending a
3 compressed video output signal and receiving a compressed video input signal, having
4 at least one network interface to a packet-based network, the network interface
5 comprising:

6 a missing packets repair logical unit, said missing packets repair logical unit
7 handling missing packets and thereby maintaining continuity of a video stream and
8 reducing traffic over said network.

1 2. The network interface of claim 1, wherein the missing packets repair logical unit
2 further comprises:

3 a first analyzer that analyzes if a packet is missing;

4 a second analyzer that analyzes which Group Of Blocks (GOBs) are in the
5 missing packet; and

6 a repair unit that replaces the missing packets.

1 3. The apparatus of claim 1 wherein the network is a local area network.

1 4. The apparatus of claim 1 wherein the network is a wide area network.

1 5. The apparatus of claim 1 wherein the video stream is repaired during a video
2 stream receiving.

- 1 6. A system comprising:
2 a network interface unit having
3 a video stream repair unit that receives a video stream from a real time
4 protocol unit, having
5 a detector unit that detects missing packets,
6 an analyzer unit that analyzes which video parts are missing,
7 a replacement unit that
8 receives
9 an indication from the detector unit that packets are
10 missing, and
11 information from the analyzer unit, the information
12 including which video parts are missing, and
13 in response to receiving the indication and the information
14 replaces a missing packets in a video stream during transmission of
15 the video stream over a network as part of a receive process.

1 7. A method for repairing missing packets in video communication over a packet-based
2 network, the method comprising:

3 analyzing if at least one packet is missing;
4 determining which Group of Blocks (GOBs) are missing;
5 preparing new packets which will replace the GOBs; and
6 sending the new packets to a destination.

1 8. The method of claim 7 wherein the destination is a point remote from where the
2 analyzing occurs.

1 9. A method comprising:
2 transmitting a video session over a network; and
3 replacing a missing part from the video session while the video session is being
4 transmitted.

1 10. The method of claim 9 wherein the missing part is replaced in an intermediate node
2 during a receiving process that receives the video session.

1 11. The method of claim 10 further comprising detecting the missing part during the
2 receiving process.

1 12. The method of claim 11 wherein detecting the missing part includes detecting if a
2 part of the video session received is out of sequence

1 13. The method of claim 9 wherein replacing the missing part is dependent on the frame
2 type.

1 14. The method of claim 12 wherein:
2 each part of a video session has an ID number; and
3 analyzing which part is missing comprises
4 finding the ID number of the last received video session part , and
5 finding the ID number of a first video session part of a stream currently
6 being analyzed.

1 15. The method of claim 9 wherein the missing part is at least one GOB.

1 16. A computer usable storage medium having stored thereon a method comprising:
2 transmitting a video session over a network; and
3 replacing a missing part from the video session while the video session is being
4 transmitted.

1 17. The computer usable storage medium of claim 16 wherein the missing part is
2 replaced in an intermediate node during a receiving process that receives the video
3 session.

1 18. The computer usable storage medium of claim 17, the method further comprising
2 detecting the missing part during the receiving process.

1 19. The computer usable storage medium of claim 18 wherein detecting the missing part
2 includes detecting if a part of the video session received is out of sequence

1 20. The computer usable storage medium of claim 16 wherein replacing the missing part
2 is dependant on a frame type.

1 21. The computer usable storage medium of claim 19 wherein:
2 each part of a video session has an ID number; and
3 analyzing which part is missing comprises;
4 finding the ID number of the last received video session part , and
5 finding the ID number of a first video session part of a stream currently
6 being analyzed.
7

1 22. The computer usable medium of claim 16 wherein the missing part is a packet.

1 23. The network interface of claim 1, wherein the missing packets repair logical unit
2 further comprises:

3 a first analyzer that analyzes if a packet is missing;

4 a second analyzer that analyzes which Slices are in the missing packet; and

5 a repair unit that replaces the missing packets.

1 24. A method for repairing missing packets in video communication over a packet-based
2 network, the method comprising:

3 analyzing if at least one packet is missing;

4 determining which Slices are missing;

5 preparing new packets which will replace the Slices; and

6 sending the new packets to a destination.

1 25. The method of claim 9 wherein the missing part is at least one Slice.